

McCormick et al
U.S. Serial No. 10/067,892
Page 2 of 5

RECEIVED
CENTRAL FAX CENTER
AUG 10 2006

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listing of the claims in the application:

LISTING OF THE CLAIMS:

Claims 1-50 (canceled).

Claim 51. (currently amended) A method of producing a polypeptide comprising a first and second domain comprising the steps of:

- (a) joining a nucleic acid encoding the first domain of the peptide to a nucleic acid encoding a first part of a plurality of different linkers ~~linker~~ to produce a first nucleic acid construct;
- (b) joining the nucleic acid encoding a second part of the plurality of different linkers ~~linker~~ to a nucleic acid encoding the second domain of the polypeptide to produce a second nucleic acid construct;
- (c) incorporating said first and said second constructs into a transient plant expression vector in frame so that, when expressed, the polypeptide bears the first and second domain separated by the plurality of different linkers ~~linker~~;
- (d) transfecting a plant with the vector so that the plant transiently produces the polypeptide; ~~and~~
- (e) recovering the polypeptide as a soluble correctly-folded protein; and
- (f) screening for a polypeptide that induces an idio-type-specific immune response directed against said polypeptide.

McCormick et al
U.S. Serial No. 10/067,892
Page 3 of 5

Claim 52. (previously presented) The method of claim 51, wherein the first domain of said polypeptide is the Ig V_H domain and the second domain is the Ig V_L domain, both of which domains create an idiotype of a surface Ig of a B cell lymphoma, and wherein said polypeptide induces an idiotype-specific response directed to said lymphoma, and wherein said polypeptide induces an idiotype-specific immune response directed to said lymphoma upon administration to a subject.

Claim 53. (original) The method of claim 52 wherein the plant is a plant cell.

Claim 54. (previously presented) The method of claim 51 wherein said domains are linked by an amino acid linker that:

- (a) has between one and about 50 residues;
- (b) consists of between one and 12 different amino acids, and
- (c) facilitates secretion and correct folding of said polypeptide to mimic the tumor epitope in its native form in or on said tumor cell.

Claim 55. (currently amended) The method of claim 54 wherein the plurality of different linkers are members ~~linker is a member~~ of a randomized library of linkers that vary in size and sequence, and said library is encoded by nucleic acid sequences consisting of a repeated pattern of degenerate repeated triplet nucleotides having the following requirements:

- (i) position 1 of each repeated triplet cannot be the same nucleotide as position 2 of the repeated triplet;
- (ii) position 2 of each repeated triplet cannot be the same nucleotide as position 3 of the repeated triplet; or
- (iii) position 1 of each repeated triplet cannot be the same nucleotide as position 3 of the repeated triplet.

McCormick et al
U.S. Serial No. 10/067,892
Page 4 of 5

Claim 56. (previously presented) The method of claim 55, wherein the nucleotide in the first and second positions of each repeated triplet is selected from any two of deoxyadenosine, deoxyguanosine, deoxycytidine or deoxythymidine.

Claim 57. (previously presented) The method of claim 56, wherein

- (i) position 1 of each repeated triplet is deoxyadenosine or deoxyguanosine;
- (ii) position 2 of each repeated triplet is deoxycytidine or deoxyguanosine;
and
- (iii) position 3 of each repeated triplet is deoxythymidine.

Claim 58. (previously presented) The method of claim 52 wherein the polypeptide induces the idiootype-specific immune response without a need for an adjuvant or other immunostimulatory material.

Claim 59. (previously presented) The method of claim 51 wherein the vector is transiently expressed in the cytoplasm.

Claim 60. (previously presented) The method of claim 51 further comprising after transfecting the plant, allowing the vector to spread throughout the plant before recovering the polypeptide.